

**REMARKS:**

SUBSTITUTE SPECIFICATION

The Examiner has required new application papers with lines double-spaced on good quality paper. In response, the  
 5 Applicants are submitting herewith a substitute specification with the text double spaced on good quality paper as required by the Examiner. In accordance with 37 CFR 1.125(b)(1), the Applicants submit that the substitute specification contains no new matter. Furthermore, although no amendments are being  
 10 currently entered, the substitute specification does include the changes to the claims made by the amendment submitted on November 12, 2002. In a telephone conversation with Joshua D. Isenberg on August 13, 2003 the Examiner indicated that this would be acceptable.

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CLAIM REJECTIONS

35 USC 103

The Examiner has rejected claims 1-13 and 15-22 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent 6,094,293 to Yokoyama et al. (hereinafter Yokoyama) in view of European  
 20 Patent Publication 0,683,414 to Netzer (hereinafter Netzer). In making the rejections, the Examiner states that Yokoyama discloses a rotating element (18 in Fig. 11) being a first electrode, a vertical stop (4' in Fig 11) disposed proximate the rotating element, a means for measuring capacitance between  
 25 electrodes (98A and 98B in Fig. 11 and 402 in Fig. 36), and means for determining from the capacitance a digital control

state of the device (col. 2, lines 34-38). The Examiner admits that Yokoyama measures the capacitance between fixed electrodes rather than between a moving and fixed electrode. The Examiner argues that Netzer discloses measurement of the capacitance  
5 between moving and fixed electrodes (elements 150 and 152 in Fig. 8, column 8, lines 28-39). The Examiner argues that both patents have the same problem solving area, namely providing reliable estimation of the mirror position. The Examiner concludes that it would have been obvious to one of skill in the art to use the  
10 Netzer solution to determine the mirror position by measuring the capacitance.

The Applicants respectfully traverse the rejections on the grounds that neither Yokoyama nor Netzer teaches or suggests measuring the capacitance between an electrode in a rotatable  
15 element or mirror and another proximately disposed electrode as recited in claims 1, 6, 16 and 22.

Specifically, as the Examiner admits, Yokoyama teaches measuring the capacitance between fixed electrodes 98A and 98B of Fig. 11 and 402 of Fig. 36. The Applicants submit that Netzer's  
20 capacitance measurement scheme is no different from Yokoyama's. Netzer teaches that the sensor 124 is coupled to the fixed electrodes 152 (see Fig. 8). No capacitance sensor is coupled between the fixed electrodes 152 and the moving plate 150. Instead, Netzer teaches applying an oscillating signal to the  
25 plate 150 and measuring the resulting modulated oscillating signals at the respective portions of split conducting plate 152

with amplifiers 156 and 158 (see col. 8, lines 40-50. Note that in Fig. 8, reference numeral 124 (the sensor) points to the amplifiers and not the to the oscillating voltage source 154. Thus, the Applicants submit that Netzer, like Yokoyama, teaches  
5 measuring the capacitance between two fixed electrodes. As such, neither Yokoyama nor Netzer teaches or suggests measuring a capacitance between a mirror or an electrode included in a rotatable element and another proximately disposed electrode as recited in claims 1, 6, 16 and 22. Consequently, no combination  
10 of Yokoyama with Netzer teaches all the limitations of independent claims 1, 6, 16 and 22.

Furthermore, claims 2-5, 7-14, 15 and 17-21 depend, either directly or indirectly from claims 1, 6, 16 and 22 and recite additional features therefor. As such, and for the same reasons  
15 set forth above, the Applicants submit that these dependent claims define an invention suitable for patent protection.

#### ALLOWABLE SUBJECT MATTER

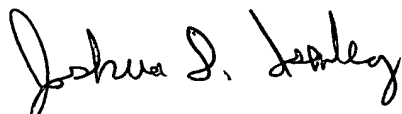
The Examiner has indicated that claim 14 would be allowable if rewritten in independent from including all of the limitations of  
20 the base claim and any intervening claims. Although the they appreciate the indication of allowable subject matter, the Applicants believe that claim 14 is allowable as it stands for the reasons set forth above.

CONCLUSION

In view of the above remarks, the Applicants submit that all pending claims are allowable over the prior art of record.

5 Therefore, the Applicants respectfully request that the Examiner reconsider the application and issue a Notice of Allowance in the next Office Action.

Respectfully submitted,

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